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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,422	04/15/2005	Takco Oshimi	OSHMII	8968
1444 7590 03/06/2007 BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303			EXAMINER ZIMMERMAN, JOHN J	
			ART UNIT	PAPER NUMBER
			1775	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/06/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/531,422

Applicant(s)

OSHIMI ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 2/2/07 (election).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/15/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20050415.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **FIRST OFFICE ACTION**

### ***Election/Restrictions***

1. Applicants election of the invention of Group I is noted. Election was made without traverse in the reply filed on February 2, 2007. Pending claims 1-3 and 5 are in the elected Group I. Claim 4 has been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the nonelected invention of Group II.

### ***Priority***

2. Acknowledgement is made of a claim for foreign priority under 35 U.S.C. 119(a)-(d). A copy of the certified copy of the priority document has been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

### ***Information Disclosure Statement***

3. The "INFORMATION DISCLOSURE STATEMENT (IDS)" received April 15, 2005 has been considered. An initialed form PTO-1449 is enclosed with this First Office Action.

### ***Claim Objections***

4. Claim 1 is objected to because of the following informalities: The spacing in the density "1, 200" in claim 1, line 4, should be corrected.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harayama (U.S. Patent 6,054,225) in view of Shimizu (U.S. Patent Application Publication 2002/0060159).

7. Harayama discloses forming a sliding member having a chromium plating film containing hard particles in network-shaped microcracks (e.g. see Figure 1b). The crack density is in the range of 0 to 200 lines per millimeter (e.g. see column 2, lines 40-50) and the hard particles are contained in 3 to 15% by volume (e.g. see column 2, lines 22-28). Multiple layers may be formed (e.g. see Figure 2b). Although Harayama does not disclose the same crack density range as recited in claim 1 (e.g. line 4), the crack density range of Harayama overlaps that recited by the claims and it would have been obvious to one of ordinary skill in the art at the time the invention was made to practice the invention of Harayama over his entire disclosed crack density range because Harayama discloses that this is his invention. Harayama may differ from the pending claims in that Harayama may not require a surface-occupying ratio of 10-20% by area (e.g. see claim 1, line 3). Shimizu, however, is applied to clearly show that optimizing

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the surface-occupying ratio of microcracked chromium coatings in the art is conventional in order to obtain best sliding properties for these types of coatings (e.g. see paragraph [0020]). In view of Shimizu, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the microcrack surface-occupying ratio of Harayama because Shimizu clearly shows that it is understood in the art that optimizing the microcrack surface-occupying ratio results in better sliding properties of microcracked chromium coatings.


### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional prior art made of record serves to further establish the level of ordinary skill in the art at the time the invention was made.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John J. Zimmerman  
Primary Examiner  
Art Unit 1775

jjz  
March 4, 2007